

Applicant: Falke et al.
Serial No.: 10/046,808
Group Art Unit: 1711

REMARKS

Claims 1-3, 6-14, and 16 remain in the application with claim 1 in independent form.

Claim 14 has been amended.

Claim 14 stands objected to for inclusively depending from cancelled claims 4 and 5.

Applicant has amended claim 14 as suggested by the Examiner and the objection is overcome.

Claims 1-3, 6-14 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bleys (United States Patent Number 5,521,226). The Examiner contends that Bleys discloses preparations of flexible polyurethane foams and provides motivation for varying the amounts of high EO polyols to form the polyurethane foams.

Applicant respectfully traverses the 35 U.S.C. §103(a) rejection. For a rejection under 35 U.S.C. §103, there must be a motivation or suggestion in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify or to combine the reference teachings to arrive at the claimed invention. There is no motivation or suggestion found in the reference to modify the teachings to arrive at the claimed invention.

Bleys discloses a flexible polyurethane foam formed from a polyol composition comprising a polyoxyalkylene polyol (a) and another polyol (b). The polyol (a) has at least 50% by weight of oxyethylene content. Bleys teaches that “polyols having higher oxyethylene content, for example 50% or more on a weight basis, are often employed as *minor additives* to ensure that the foams have an open-cell structure.” (*See col. 1, lines 20-24*). Bleys further

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teaches that polyol (a) is used in *an amount of from 5 to 30% by weight* based on the total weight of the polyol composition. (*See col. 1, line 33-36*). In each of the 25 Examples, the high oxyethylene content polyol is used in *an amount of at most 15 parts by weight*. Therefore, polyol (a) which has high oxyethylene content is a minor additive. The other polyol (b) has an oxyethylene content of below 50% by weight and is used in an amount of from 70 to 95% by weight based on the total weight of the polyol composition. (*See col. 1, lines 38 and lines 63-65*).

The subject application claims a process for the preparation of ***low-odor*** flexible polyurethane foams by reacting organic and/or modified organic polyisocyanates (a) with a polyetherol mixture (b). The polyetherol mixture includes a first component (b1) and a second component (b2). The first component (b1) has an ethylene oxide content of at least 30% by weight, based on the total amount of alkylene oxide used in the polyetherol (b1) and is used in *an amount of at least 50% by weight*, based on the total weight of the polyetherol mixture (b). The second component (b2) is based on propylene oxide and/or butylene oxide and is optionally based on ethylene oxide. If present, the ethylene oxide content is less than 30% by weight, based on the total amount of alkylene oxide used in the polyetherol (b2). The polyetherol (b2) is used in *an amount of less than 30% by weight*, based on the total weight of the polyetherol mixture (b).

Bleys does not teach or suggest that the high oxyethylene content polyol can be used in major proportions or in amounts greater than 50% by weight based on the total weight of the

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polyols. Specifically, Bleys teaches away from using higher amounts of the high oxyethylene content polyol by referring to such as a minor additive and using at most 15 parts by weight in the Examples. Therefore, the proposed modification to Bleys would render Bleys unsatisfactory for its intended purpose, i.e., using the high EO content polyol as a minor additive. Based upon the above, there is no suggestion or motivation to modify Bleys, and it would not have been obvious to increase the amount of the high oxyethylene content polyol to greater than 50% by weight based on the total weight of the polyols.

Further, Bleys does not teach or suggest all of the claim limitations. In determining the differences between Bleys and the claimed invention, the question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. The subject application claims a *low-odor* polyurethane foam, whereas Bleys does not disclose, teach, or suggest such a low-odor polyurethane foam. Referring to the specification as originally submitted, it has been surprisingly found that the resultant flexible polyurethane foam has reduced odor, *in spite of the high proportions of ethylene oxide rich polyether* that was used in the formation of the foam (*see page 3, lines 14-18 and page 4, lines 22-34*). The novel combination of the polyetherol mixture (b) and the at least one catalyst (e) results in the flexible polyurethane foam having the low odor as illustrated in the Example section of the originally submitted application. The reduced odor in conjunction with the flexibility of the polyurethane foam results in more practical uses for flexible polyurethane foams (*see page 15, lines 36-46*.) One skilled in the art would not use a major proportion of a

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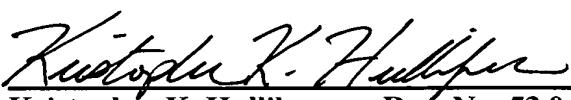
polyol having a high ethylene oxide content and expect to arrive at a low-odor flexible polyurethane foam. Therefore, it is believed that the 35 U.S.C. §103 rejection is overcome and claim 1 and claims 2, 3, 6-14, and 16, which depend directly or indirectly from claim 1, are non-obvious, and thus allowable.

Furthermore, claims 1-3, 6-14 and 16 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 12-14 of copending Application No. 10/242,741 (the '741 application). Applicant submits herewith a terminal disclaimer in compliance with 37 C.F.R. 1.321(c) to obviate the nonstatutory double patenting rejection. Also enclosed herewith is a check in the amount of \$110.00 to cover the terminal disclaimer fee as set forth in 37 CFR 1.20(d).

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. If any additional fees become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789.

Respectfully submitted,
HOWARD & HOWARD ATTORNEYS

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Date


Kristopher K. Hullberger, Reg. No. 53,047
The Pinehurst Office Center, Suite 101
39400 Woodward Ave.
Bloomfield Hills, MI 48304-5151
(248) 645-1483